

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A method for producing a fine carbon fiber that comprises a center portion and a peripheral portion, the center portion having a carbon structure different from that of the peripheral portion, comprising:

preparing fine particles of a catalyst in a reversed micelle, wherein the catalyst comprises a transition metallic compound comprising at least one element selected from the group consisting of Fe, Ni, and Co; and

thermally decomposing a carbon material in the presence of a catalyst fluid containing a solvent and the fine particles of ~~a~~the catalyst dispersed therein, wherein the fine particles have a size of 20 nm or less, ~~and the catalyst comprises a transition metallic compound comprising at least one element selected from the group consisting of Fe, Ni, and Co, wherein the~~ and the transition metal compound is dispersed in the carbon material serving as a carbon source to form a mixture of the transition metallic compound and the carbon material, and the mixture is sprayed in the form of a liquid into a reaction furnace by a carrier gas.

2. (original): The method according to claim 1, wherein the fine particles are dispersed in an organic dispersant by a dispersant or a surfactant, and the transition metal compound is dispersed in an amount of 0.003 to 5 mass %.

3. (original): The method according to claim 2, wherein the surfactant is a cationic or anionic surfactant.

4. (original): The method according to claim 1, wherein a sulfur compound is employed as a promoter in an amount of 0.01 to 10 mass %.

5.-6. (canceled).

7. (original): The method according to claim 1, wherein the catalyst fine particles are Fe_3O_4 fine particles prepared in a reversed micelle containing water/bis(2-ethylhexyl) sulfosuccinate sodium salt (AOT)/benzene.

8. (previously presented): The method according to claim 7, wherein the transition metal compound is dispersed in an amount of 0.003 to 5 mass%.

9. (previously presented): The method according to claim 7, wherein a sulfur compound is employed as a promoter in an amount of 0.01 to 10 mass%.